

BioBloc™ by ENTEX Technologies

Modular Nitrification/Denitrification

Engineering
a Clean Water
Environment



BioBloc units float into place as the system is secured between stainless steel cables that extend from shore to shore.

Typical specifications for a 100 foot³ model in a nitrification application:

*Dimensions: 5' l x 4' w x 5' d
Air per unit: 15 scfm/unit
Installation weight: 1,100 lbs.
Constr. Material: 303 Stainless Steel
Media Surface Area: 13,700 ft²*

US Pat No. 6348147, 6,344,144

***BioBloc** is a system designed to bring the proven benefits of fixed-film treatment to any aerobic-based system. Expand the treatment efficiency and capacity of any lagoon, tank, package plants or activated sludge system with BioBloc technology.*

Installed in over 35 treatment plants in the United States and the United Kingdom since 1999, BioBloc is recognized as a dependable method of removing ammonia with installation that requires no down-time to operations.

The BioBloc system is modular, and is configured to meet your exact nitrification/denitrification requirements. Unit construction is flexible. Units have been constructed in media retention cage volumes ranging from as little as 40 feet³ to as large as 480 feet³.

Unlike an RBC or trickling filter, the aerated media beds in a BioBloc are permanently immersed in water, and aerated by an efficient fine bubble diffusion system.



BioBloc is a simple and effective addition to biological treatment basins of all types and sizes.

BioBloc installation is simple: just float out and attach air hoses.

BioBloc provides the benefits of attached growth media in all types of systems.

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BioBloc by ENTEX Technologies, continued

Why is BioBloc cost-effective?

Attached growth media modules enhance system stability for both BOD5 and NH3-N removal.

Systems with BioBloc use energy efficient fine bubble aeration.

BioBloc eliminates the need for expensive system renovations.

Energy requirements

The BioBloc system's energy requirements are minimal. Each standard BioBloc module requires 15–20 SCFM for normal operation in the nitrification mode. In denitrification, the diffusers are not operated, and mixing equipment is activated to circulate water and nitrate through the media beds. The system can be toggled off and on from aerobic to anoxic and back to aerobic modes to accomplish TN removal objectives.

BioBloc modular systems are configured to meet your plant's exact nitrification as well as denitrification requirements. Unit construction from a floating platform allows for operation in shallow lagoons as well as in lagoons with variable bottom conditions.

Bolsters microorganisms

BioBloc provides a rich and stable environment that bolsters existing microorganism, creating greater efficiency with minimal site work. When the media bed becomes laden with an overgrowth of biomass, the BioBloc's dual diffusion system can be used to quickly back-flush each unit by the simple manipulation of air system control valves on the shore.

Fine and coarse bubble diffusers

Each BioBloc module is filled with thousands of pieces of bio-media where healthy biomass is formed by a supply of air and water produced by fine bubble diffusers located on the bottom of each bio-chamber. The patented BioBloc has a separate coarse-bubble system that periodically scours the media bed and clears the chamber to encourage renewed growth.

Versatility

BioBlocs are designed to be deployed individually, in parallel or in series to remove pollutants. They diffuse a high level of dissolved oxygen into surrounding wastewater through the media bed. The units are custom built to each application and can be easily installed using a light-duty boom truck and floated into place.

Advanced Systems. Proven Solutions.

ENTEX engineers have been involved in hundreds of plant installations. We'd like to be involved in yours.

